

**Project Title** : Population chances of sucking pests and their effects in terms of yield and quality on some cotton varieties

**Start Date** : 2014

**Supporting Body** : GDAR (General Directorate of Agricultural Research and Policy)

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**Co-researchers** : -

**Summary** :

Cotton is an important industrial crop which is provide crucial important value into Turkish economy and cotton is also leading crop in Ege Region of Turkey. Variety of pest exist during different developmental stages of cotton. Among the pests, *Aphis gossypii* Glov. (Hemiptera: Aphididae), *Thrips tabaci* Lind. (Thysanoptera: Thripidae), *Asymmetrasca decedens* (Paoli), *Empoasca decipiens* Paoli. Hemiptera: Cicadellidae) *Bemisia tabaci* Genn. (Hemiptera: Aleyrodidae) are generally seen all vegetation period and known main pests of cotton. Among the pest listed above, flower thrips *Frankliniella intonsa* Tryb., *F. occidentalis* Perg. (Thysanoptera: Thripidae) and plant bugs (*Exolygus gemellatus* H.-S., *E. pratensis* L., *Creontiades pallidus* Rumb. Hemiptera: Miridae)) are not the main pest for which they are not damage to the bolls but they give damage to generative organs and therefore they reduce the yield.

In the study, 4 earliness (Gloria, Carizma, Flash, Özbek 105), and 4 late flowering (PG2018, Claudia, Carmen GSN12,) cotton varieties will be evaluated in terms of sucking pests. Population fluctuations of species point at issue will be researched and determined their effects in terms of yield and quality.

The studies will be started on the 3 leaf stage of cotton on May and will be end until harvest on September. For this purpose, For this purpose, edge rows of each parcel will be eliminated and the rows standing middle of the parcell will be used to count by loop sucking pests, adults and nimfs will be taken into account for recording separately.

Determination of the effect of the sucking pests fluctuations on cotton yield and quality, the parcels will be constituted as a treated and untreated and yield per decare will be calculated. Treated parcels will be applied with specific insecticides to the sucking pests and maximum yield and quality caused by sucking pests will be revealed. Studies will be carried out by Nazilli Cotton Research Station.

It is priority that using resistant and tolerant variety against pest in cotton is very important for integrated pest management. In frame of the project, population dynamics of the pests, that cause economical damage will be determined in different varieties, level of damage will be identified and effect of the pests on yield and yield quality will be determined. Resistant or tolerant varieties, which might have potential using in integrated pest management systems, will be determined. Eventually, yield losses, reducing of unnecessary chemical applications, healthy, growing of quality and high yielding cotton and protection of human and environment are aimed with this project.